

1 **Supplemental Material:**

2 Author contributions:

3 JM: designed study, oversaw clinical activities, did PCR analysis, analyzed data, edited manuscript

4 LC-V: conceived of study, provided *A. afra* PAR and *A. annua* BUR, managed project finances, wrote and
5 edited manuscript

6 MI: supervisor of the study, in the health centers.

7 LC: did statistical analyses, analyzed data, edited manuscript

8 PLutgen: provided *A. annua* LUX, edited and translated manuscript

9 CP: aided study design, interpreted data

10 NM: assisted in obtaining national research permits from the Ministry of Scientific Research

11 JB: Coordinator of the National Malaria Program, helped with authorization and realization of the study

12 BM: helped establish the ethical protocol of the study

13 PLalukala: Minister of Public Health of the province, helped manage the study

14 GM: provided *A. afra* SEN, established *Artemisia* sp. herbarium vouchers, edited manuscript

15 DM: helped interpret biological and molecular data

16 MT: did phytochemistry of *Artemisia* sp. samples, analyzed data, edited manuscript

17 PW: analyzed data, wrote and edited manuscript

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19 ***Artemisia annua* global cultivation locations:**

20 *Artemisia annua* is grown and will grow in all areas of the world where malaria is prevalent. Countries

21 where *A. annua* is being grown either in commercial plantations (CP) or by small-stakeholder farmers

22 (SSF) include: CP, Kenya, Tanzania, Uganda, Madagascar, China, Vietnam, Brazil, Nigeria, Mozambique,

23 Malawi, Zambia, Senegal, Ghana, Rwanda, and South Africa (Dalrymple 2012 *Artemisia annua*,

24 Artemisinin, ACTs & Malaria Control in Africa Tradition, Science and Public Policy, Washington DC:

25 Politics and Prose Bookstore, 2012. Pp. xii + 253.); SSF, in addition to the prior countries, also includes

26 Burkina Faso, Mali, Burundi, Togo, Gabon, RD Congo, Central African Republic, Benin, Cameroon,

27 Guinea, Ivory Coast, Chad, Guinea Conakry, Ivory Coast, and Congo-Brazza (La Maison de l'Artemisia,

28 <http://maison-artemisia.org/Maison-Artemisia-Brochure-Nos-Actions.pdf> accessed Feb. 22, 2018) and

29 from P. Lutgen, 2010: Zambia, Ethiopia, Burundi, S. Sudan, The Gambia, Rwanda). *A. annua* is also grown

30 in Pakistan, India and the USA (P Weathers and J Ferreira). Given the difficulty in delivering ACTs to

31 patients in the bush/rural areas, the ability to grow this plant in small communities would be most

32 helpful. La maison de l'Artemisia, IDAY, Mediplant, Ritam, IFBV, ICEI, East-West Seeds, and Anamed have

33 all helped spread seeds of the plant for general use.

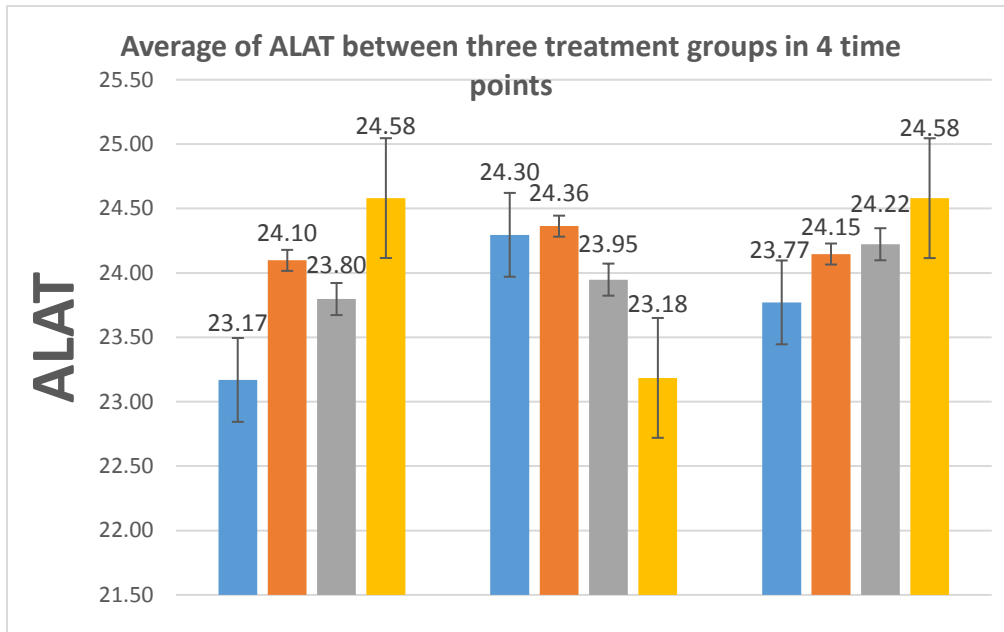
34 **Table S1:** Distribution of clinical signs and symptoms at time of trial inclusion.

Symptom	Artemisia N=502; n (%)	ASAQ N=498; n (%)	Total N=1000; n (%)
Fever	502 (100.0%)	498 (100.0%)	1000 (100.0%)
Headache	150 (29.8%)	140 (28.0%)	290 (29.0%)
Asthenia	89 (17.7%)	90 (18.0%)	179 (17.9%)
Anorexia	60 (11.9%)	54 (10.8%)	114 (11.4%)
Chills	130 (25.8%)	124 (24.9%)	254 (25.4%)
Arthralgia	20 (3.9%)	22 (4.4%)	42 (4.2%)
Abdominal pain	97 (19.3%)	86 (17.0%)	183 (18.3%)
Vertigo	2 (0.4%)	1 (0.2%)	3 (0.3%)
Rash	12 (2.3%)	12(2.4%)	24 (2.4%)
Pallor	22 (4.3%)	19 (3.8%)	41 (4.1%)
Cough	10 (2.0%)	8 (1.6%)	18 (1.8%)
Diarrhea	12 (2.3%)	11 (2.2%)	23 (2.3%)
Nausea	5 (0.9%)	7 (1.4%)	12 (1.2%)
Vomiting	20 (3.9%)	19 (3.8%)	39 (3.9%)
Splenomegaly	225 (44.8%)	170 (34.0%)	395 (39.5%)
Hepatomegaly	72 (14.3%)	68 (13.6%)	140 (14.0%)

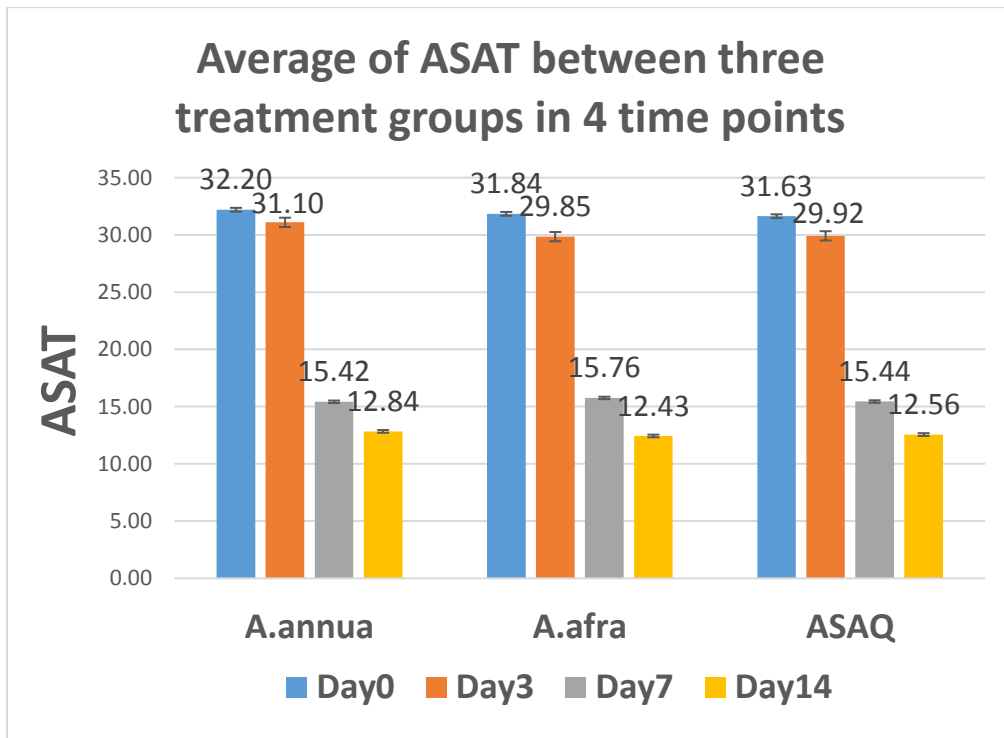
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37 **ALAT and ASAT results:**



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40 **Figure S1.** ALAT and ASAT were compared between arms and no significant differences were observed.

41 ALAT units and ASAT units are U/L.